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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,651	02/01/2006	Hirohiko Watanabe	285020US90PCT	7570
22850	7590	08/20/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER DUONG, THO V	
			ART UNIT 3744	PAPER NUMBER
			NOTIFICATION DATE 08/20/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/566,651	Applicant(s) WATANABE ET AL.	
	Examiner Tho v. Duong	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 and 21-24 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/1/06; 1/3/08 and 4/1/09</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Claims 1-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species of figures 10-14, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/27/09.

Applicant's election with traverse of species B of figures 10-14 in the reply filed on 4/27/09 is acknowledged. The traversal is on the ground(s) that the search of all the species does not place any serious burden on the examiner to search all the claims. This is not found persuasive because the species are directed to the species as listed on page 2 of the Office Action sent 4/6/09. Each species are identified with different sets of figures and each set of species are independent and distinct and the search for each species places a serious search burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Calleson (US 5,152,339). Calleson discloses (figures 7,10 and column 5, lines 8-11) a heat exchanger comprising a first and second header tank arranged as spaced apart from each other and a plurality of tubes arranged in parallel between two header tanks and having opposite ends joined to the respectively header tanks, at least one of the header tank having a front and a rear portion which are asymmetric in cross sectional contour, has at least an outer portion made of an extrudate member (122), and the extrudate member is integrally provided with a ridge (192) positioned on an outer surface of the member away from center thereof with respect to the forward or rearward direction and extending longitudinal thereof, the extrudate member having a front portion and a rear portion which are symmetric except the ridge in cross sectional contour; a first member (150) to be joined to the heat exchanger tubes (112) and be brazed to the extrudate member.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calleson in view of Lee et al. (US 6,745,827). Calleson substantially discloses all of applicant's claimed invention as discussed above except for the limitation that some of the heat exchanger tubes being arranged in parallel between the inlet header and one of the intermediate header and the other heat exchanger tubes being arranged in parallel between the outlet header and the other

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intermediate header. Lee discloses (figure 1 and column 7, lines 30-43) a heat exchanger that has some of the heat exchanger tubes (51) being arranged in parallel between the inlet header (12) and one of the intermediate header (22) and the other heat exchanger tubes (52) being arranged in parallel between the outlet header(14) and the other intermediate header (24) for a purpose of allowing each individual tube in the front or rear side of the heat exchanger can be individually repair or replaced and the efficiency of the heat transfer can be improved. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Lee's teaching in Calleson for a purpose of allowing each tube in the front or rear side of the heat exchanger can be individually repair or replaced and the efficiency of the heat transfer can be improved.

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calleson in view of Baldantoni (US 6,540,016). Calleson discloses substantially all of applicant's claimed invention as discussed above except for the limitation that a process for fabricating a heat exchanger including assembling the header tanks being held by a jig having a recessed portion for an outer portion of the header tank to fit in. Baldantoni discloses (figures 3 and 4) a process for fabricating a heat exchanger including a step of assembling the header tank (10) as held by a jig (32) and the jig having a recessed portion for an outer portion of the header tank (10) to fit in so that the heat exchanger can be assembled easily. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Baldantoni's teaching in Calleson's device for a purpose of allowing the heat exchanger can be assembled easily. Regarding the limitation of a groove formed in an inner peripheral surface of the jig and extending longitudinal for the ridge to fit in, Calleson discloses a ridge (192) formed on the outer

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surface of the header tank and Baldantori teaches (figure 3) that the jig (32) fully conforms to the outer surface of the header tank so that the jig can fully support the header tank. The combined teachings of Calleson and Baldantory would have suggested to those of ordinary skill in the art to modify the Baldantory's recess to include a groove to accommodate the ridge of Calleson so that the jig can fully conform to the outer surface of the header tank of Calleson.

Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calleson in view of Voss (US 5,685,366). Calleson substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the evaporator is employed in a refrigeration cycle of a vehicle. Voss discloses (figures 1-2 and column 1, lines 12-18 and column 6, lines 55-65) an evaporator employed in a refrigerant cycle comprising a condenser and a compressor for a purpose of forming a high efficiency, small volume evaporator employed in air conditioning system of a vehicle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Voss's teaching in Calleson's device for a purpose of forming a high efficiency, small volume evaporator that is employed in a air conditioning system of a vehicle.

Allowable Subject Matter

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bertva et al. (US 5,450,896) discloses a two piece header.

Baldantoni (US 2003/0159813A1) discloses a heat exchanger manifold.

Shimmura et al. (US 5,934,367) discloses a heat exchanger.

Hausmann (US 6,082,448) discloses a collector for motor vehicle.

Carlet (US 3,893,611) discloses a jig for brazing elongated heat exchanger.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/

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Primary Examiner, Art Unit 3744